

XQuadra.POSCe

Release 1.0.0



User Manual Version 0.1

English Version



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Table of Contents

1. XQuadra.POSCe General Information.....	4
1.1 Introduction.....	4
1.2 Main Features & Functionality.....	4
1.3 System Requirements.....	4
2. Smart Cards	5
2.1 About Smart Card SLE 5542.....	5
2.2 Features.....	5
3. XQuadra Products General Comparison Chart	6
3.1 Express VS Business VS Enterprise.....	6
4. POSCe Menu	7
4.1 Tree View Menu	7
5. POSCe User Interface	9
5.1 Main Menu Description.....	9
5.2 POSCe Terminal Interface Description.....	10
5.3 POSCe Main Menu Screen	11
5.4 POSCe Application/s Screen	12
5.5 POSCe Balance Screen	18
5.6 POSCe History Screen	19
5.7 Administration Interface Description	20
5.8 Administration Options Menu	21
5.9 Administration Transactions Menu	23
6. Glossary.....	24

1. XQuadra.POSCe General Information

1.1 Introduction

XQuadra.POSCe is a software designed and developed to work with XAC POS Terminals to make transactions on XQuadra.Express, XQuadra.Business and XQuadra.Enterprise. It handles all the transaction information and data written on customers' cards such as Points and Values and these are deducted/added according to the transactions made.



1.2 Main Features & Functionality

The following are the main features offered by XQuadra.POSCe:

- **Application Selection (on XQuadra.Business and XQuadra.Enterprise)** – enables you to select an application from a maximum of 6 applications saved on customers' cards.
- **Transactions Handling** – takes care of each transaction executed and handled on the POS in a safe and accurate manner
- **View Customers' Card Balance** – enables you to display the Customers' Points and Values stored on the card.
- **View Customers' Card History** – enables you to display the last 5 transactions made on Customers' Cards.

1.3 System Requirements

These are the minimum XAC POS requirements to run XQuadra.POSCe:

- *Operating System : Windows CE 6.0*
- *64MB Ram*

2. Smart Cards

2.1 About Smart Card SLE 5542

The SLE 5542 Smart Card has an intelligent 256 bytes with Write Protection and Programmable Security Code (PSC) and with ISO 7816 Smart Card interface. SLE 5542 is a standard, low-cost memory smartcard. It has a 256 x 8-bit EEPROM data memory with 32 x 1-bit protection memory. The SLE 5542 is a fully compatible, upgraded version of the SLE 4442.

To ensure the future availability of this product type, whilst still ensuring backward compatibility to previous products, Infineon has migrated the data carrier family to the IMEM CMOS technology. IMEM is conceived for security applications and offers unsurpassed physical and electrical protection schemes.

2.2 Features

These are the SLE 5542 features:

- *100% functional compatibility to SLE 4442*
- *256 x 8-bit EEPROM organization of Data Memory*
- *32 x 1-bit Protection Memory*
 - *Byte-wise write protection of first 32 addresses (byte 0...31) of Data Memory*
 - *Manufacturer Code for unique identification of application*
- *Data Memory (addresses 0...255) alterable only after verification of 3-Byte*
- *Programmable Security Code (PSC)*
- *Two-wire link protocol*
 - *Byte-wise addressing*
 - *End of processing indicated at data output*
- *Contact configuration and Answer-to-Reset (synchronous transmission) in accordance to standard ISO/IEC 7816*
- *Sophisticated electrical characteristics*
 - *Ambient temperature -40 ... +80°C for chip, -25 ... +80°C for module*
 - *Supply voltage 5 V ± 10 %*
 - *Supply current < 3 mA (typical 600 µA)*
 - *EEPROM erase / write time 5 ms*
 - *ESD protection typical 4,000 V*
 - *EEPROM Endurance minimum 100,000 erase / write cycles*
 - *Data retention for minimum of 10 years*
- *Advanced 1.2 µm CMOS-technology optimised for security layout*
 - *EEPROM-cells protected by shield*
 - *Shielding of deeper layers via metal*
 - *Sensory and logical security functions*
 - *No isolation on backside necessary*

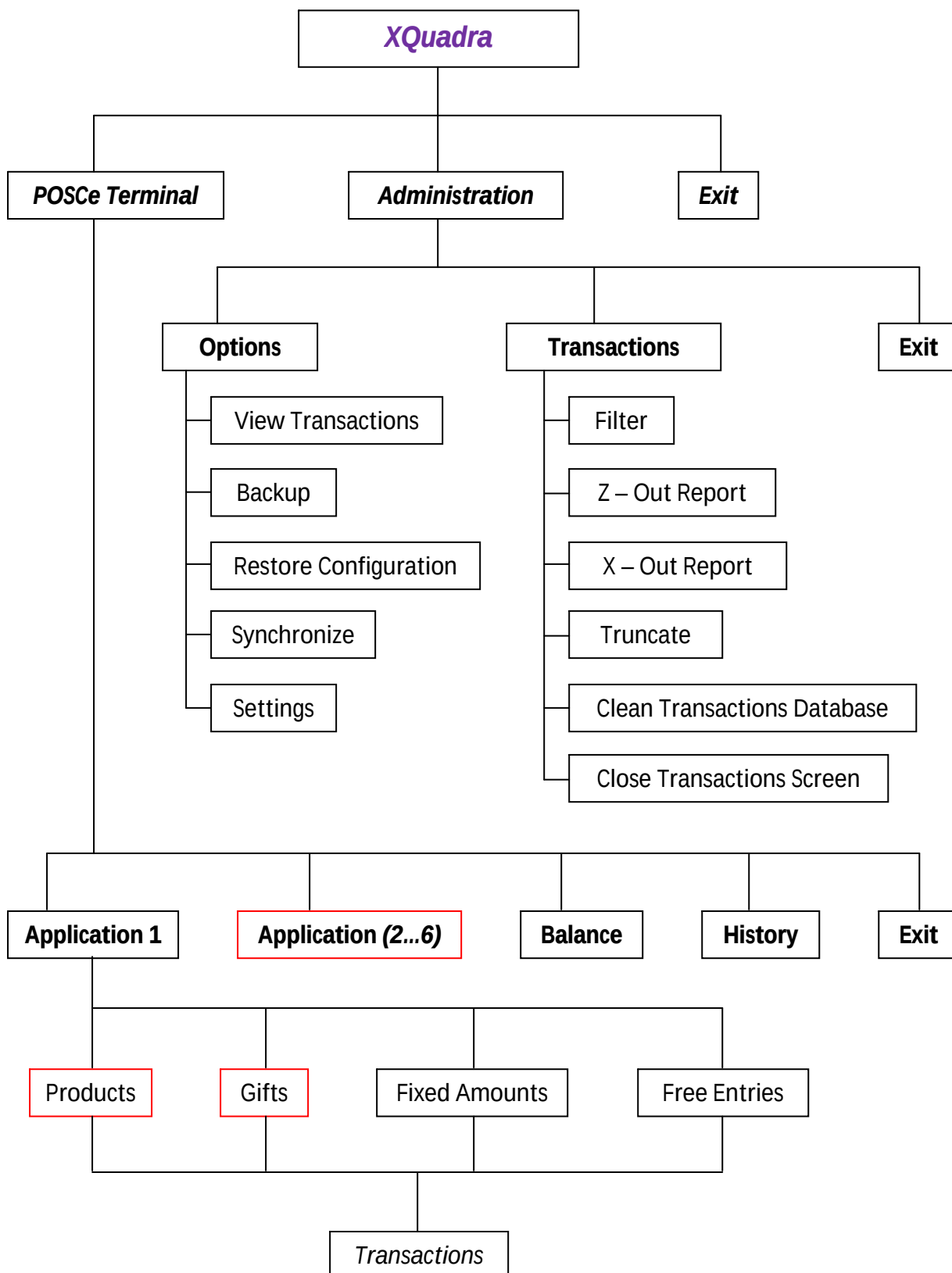
3. XQuadra Products General Comparison Chart

3.1 Express VS Business VS Enterprise

	Express	Business	Enterprise
Companies Configuration	No	1	Unlimited
Campaigns Configuration	1	1	Unlimited
Applications Configuration	Up to 6	Unlimited	Unlimited
Products Shopping Cart	No	Yes	Yes
Gifts Shopping Cart	No	Yes	Yes
Groups	No	Unlimited	Unlimited
Cards	Up to 400	Unlimited	Unlimited
Security	No	Yes	Yes
Multi User	No	Yes	Yes
Login Authentication	No	Yes	Yes
Web Services	No	Yes	Yes
User Management	No	Yes	Yes
Data Auditing	No	Yes	Yes
Other Functions	Yes	Yes	Yes
Transactions Upload	Yes	Yes	Yes
Auto Generate Cards	No	Yes	Yes
Create Batch Cards	No	Yes	Yes
Data Migrations	No	Yes	Yes
Reports	Yes	Yes	Yes
Transactions	Yes	Yes	Yes
Transaction Statistics	No	Yes	Yes
Data Reports	No	Yes	Yes
Virtual POS (Gemplus Terminal)	1	Up to 9	Unlimited
POSCe (XAC Terminal)	1	Up to 9	Unlimited
INGENICO (Proprietary Terminal)	1	No	No

4. POSCe Menu

4.1 Tree View Menu



POSCe Menu options available

	Express	Business	Enterprise
Application 1	Yes	Yes	Yes
Products - Transactions	No	Yes	Yes
Gifts - Transactions	No	Yes	Yes
Fixed Amounts - Transactions	Yes	Yes	Yes
Free Entries - Transactions	Yes	Yes	Yes
Application (2..6)	No	Yes	Yes
Products - Transactions	No	Yes	Yes
Gifts - Transactions	No	Yes	Yes
Fixed Amounts - Transactions	No	Yes	Yes
Free Entries - Transactions	No	Yes	Yes
Balance	Yes	Yes	Yes
History	Yes	Yes	Yes
Exit	Yes	Yes	Yes

5. POSCe User Interface

5.1 Main Menu Description

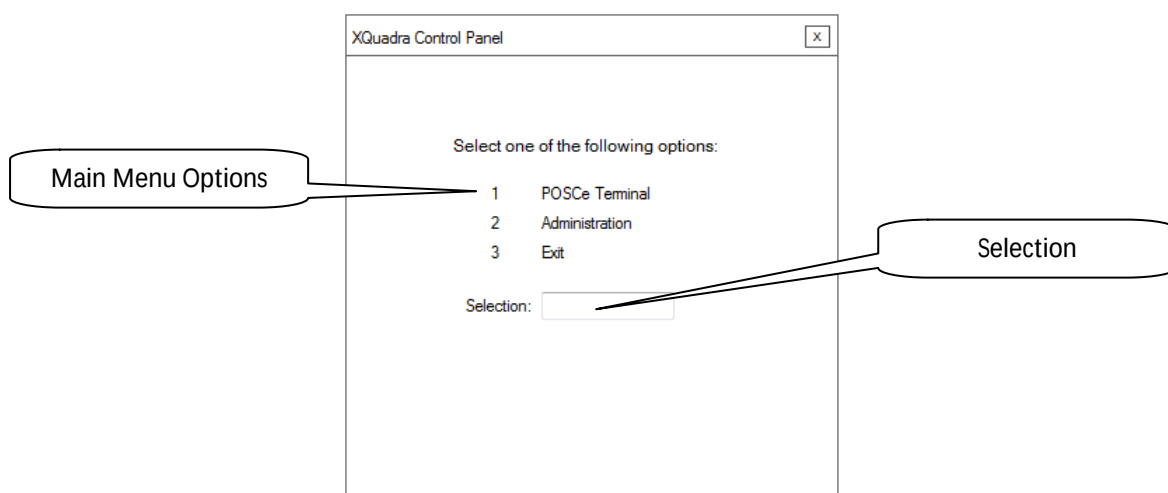


Figure 5.1

Screen Description

Main Menu Options

These are the options available in the Main Menu.

1. POSCe Terminal – The software used on the XAC terminal to run XQuadra.
2. Administration – The main management module to set configurations in XQuadra
3. Exit – To exit from the Main Menu Screen

Selection

Select an option from the Main Menu, type in the number for that selection and press “Enter”.

5.2 POSCe Terminal Interface Description

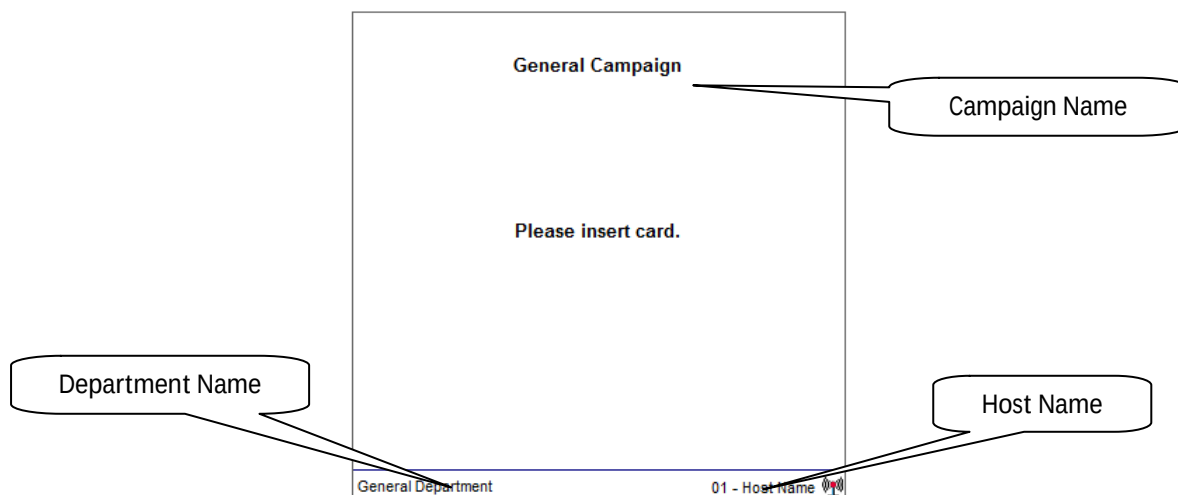


Figure 5.2

Screen Description

Campaign Name

This is the Campaign Name entered in XQuadra and for which the terminal has been configured. XQuadra.Express has only one campaign.

Department Name

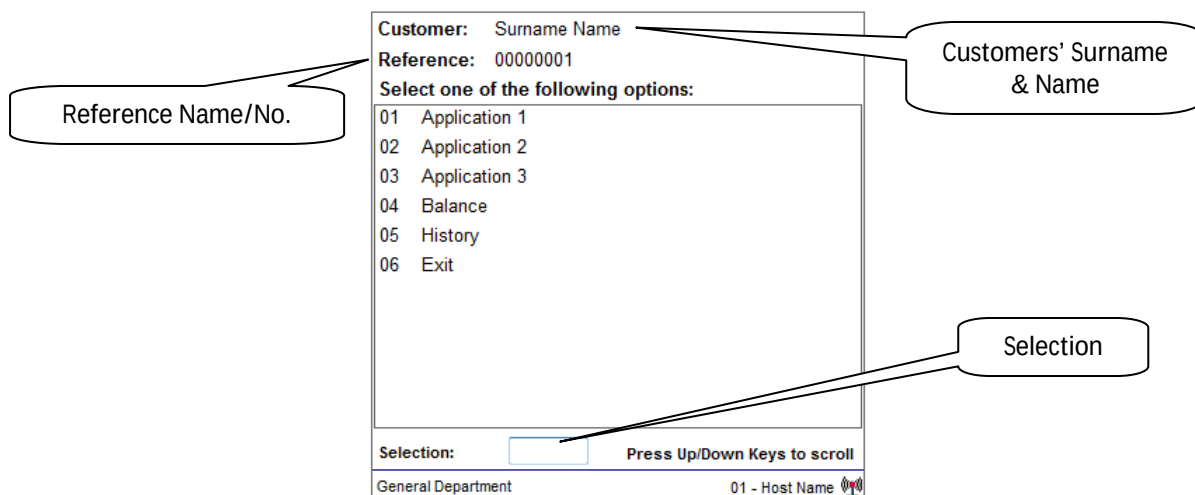
This is the Department Name for which the campaign is running.

Since XQuadra.Express is intended for small businesses and no departments are included, the Department Name is set to default "Department".

Host Name

This is the Computer Name on which XQuadra.POSCe is running.

5.3 POSCe Main Menu Screen



The screenshot shows the POSCe Main Menu Screen. It has a title bar with 'General Department' and '01 - Host Name'. The main area displays the following information:

- Customer:** Surname Name
- Reference:** 00000001
- Select one of the following options:**
 - 01 Application 1
 - 02 Application 2
 - 03 Application 3
 - 04 Balance
 - 05 History
 - 06 Exit

Callouts point to the following elements:

- Reference Name/No.:** Points to the 'Reference' field.
- Customers' Surname & Name:** Points to the 'Customer' field.
- Selection:** Points to the 'Selection' field at the bottom.

At the bottom, there is a 'Selection:' label, a text input field, and the instruction 'Press Up/Down Keys to scroll'.

Figure 5.3

Screen Description

Customer

This is the Customers' Surname & Name saved on the card.

Reference

This is the Customers' Reference name/number on the card.

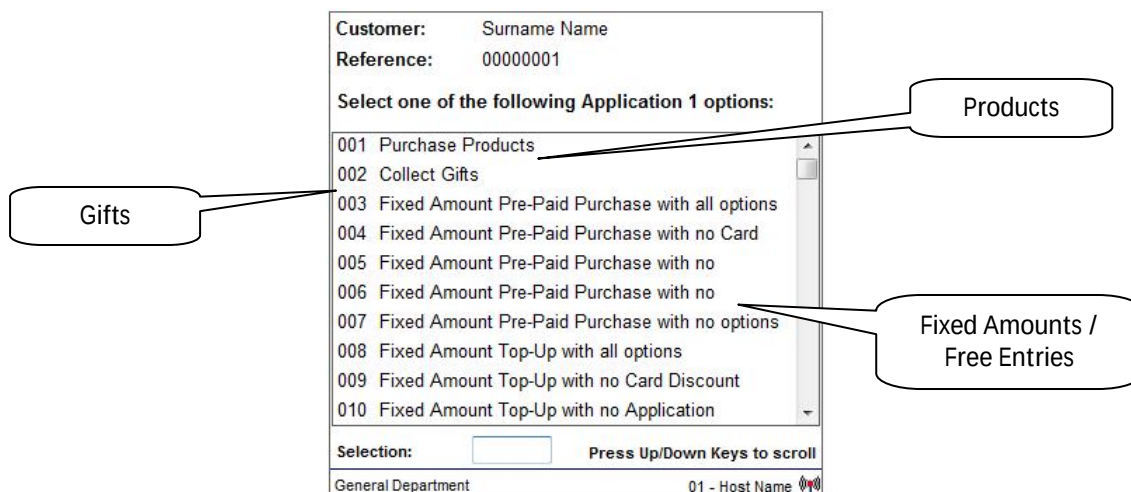
Selection

Select an option, type in the number for that selection and press "Enter".

Selection options

XQuadra.Express	XQuadra.Business / XQuadra.Enterprise
01 - Application Name This is the Application Name.	01 - ... Application Name This is the Application Name.
02 – Balance This shows the Balance on the Customers' Card (Points & Values).	The 3rd number from the bottom options list - Balance This shows the Balance on the Customers' Card.
03 – History This shows the History of the last 5 transactions recorded on the Customers' Card.	The 2nd number from the bottom options list - History This shows the History of the last 5 transactions recorded on the Customers' Card.
04 – Exit This closes the Virtual POS.	The last number from the options list - Exit This closes the Virtual POS.

5.4 POSCe Application/s Screen



Customer: Surname Name
Reference: 00000001

Select one of the following Application 1 options:

- 001 Purchase Products
- 002 Collect Gifts
- 003 Fixed Amount Pre-Paid Purchase with all options
- 004 Fixed Amount Pre-Paid Purchase with no Card
- 005 Fixed Amount Pre-Paid Purchase with no
- 006 Fixed Amount Pre-Paid Purchase with no
- 007 Fixed Amount Pre-Paid Purchase with no options
- 008 Fixed Amount Top-Up with all options
- 009 Fixed Amount Top-Up with no Card Discount
- 010 Fixed Amount Top-Up with no Application

Selection: Press Up/Down Keys to scroll

General Department 01 - Host Name

Figure 5.4

In XQuadra.Business and XQuadra.Enterprise, if the selected Application has Products and Gifts, the first two options listed will be Products and Gifts. Then the rest of the list depends on the Fixed Amounts and Free Entries entered. The last option in the list is used to Exit from the Application/s section.

Screen Description

Selection

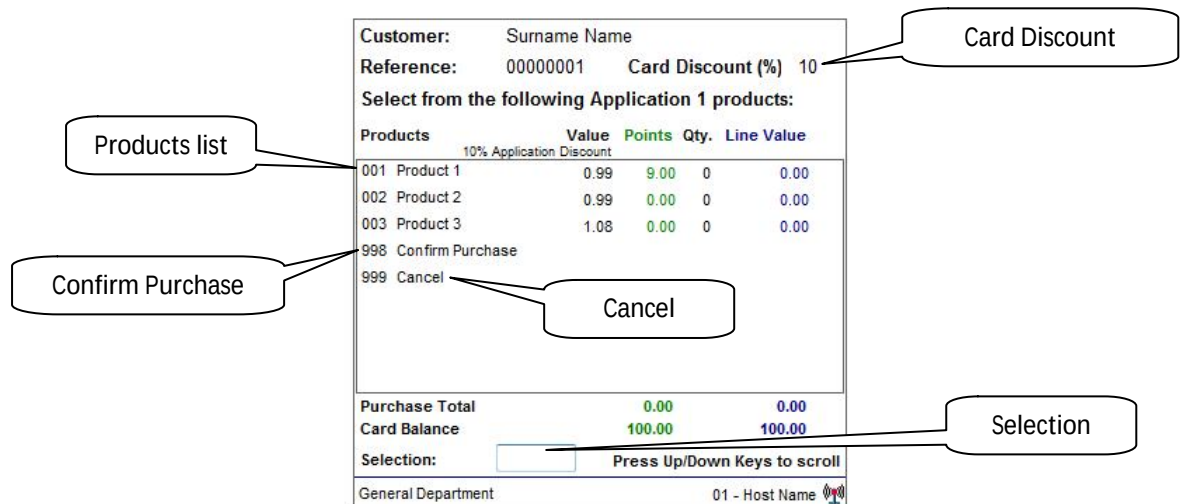
Select an option from the list, type in the number for that selection and press "Enter".

Fixed Amounts		
	Value	Points
Pre-Paid Purchase	No	No
Top-Up	No	No
Free Entry	No	No
Gift	No	No
Cash Purchase	No	No

Free Entries						
	Fixed Value		Free Entry		Multiply	
	Value	Points	Value	Points	Value	Points
Pre-Paid Purchase	Yes	No	Yes	Yes	Yes	No
Top-Up	Yes	No	Yes	Yes	Yes	No
Free Entry	Yes	No	Yes	Yes	Yes	No
Gift	Yes	No	Yes	Yes	Yes	No
Cash Purchase	Yes	No	Yes	Yes	Yes	No

Products Shopping Cart

(For XQuadra.Business & XQuadra.Enterprise only)



The screenshot shows a software interface for a shopping cart. At the top, it displays 'Customer: Surname Name' and 'Reference: 00000001'. A 'Card Discount (%) 10' is shown with a callout 'Card Discount'. Below this, it says 'Select from the following Application 1 products:'. A table lists products with columns 'Products', 'Value', 'Points', 'Qty.', and 'Line Value'. The table includes 'Product 1', 'Product 2', and 'Product 3', each with a value of 0.99 and 1.08 respectively, and points of 9.00 and 0.00. A callout 'Products list' points to the table. Below the table are options '998 Confirm Purchase' (with callout 'Confirm Purchase') and '999 Cancel' (with callout 'Cancel'). At the bottom, it shows 'Purchase Total 0.00' and 'Card Balance 100.00'. A 'Selection:' field with a callout 'Selection' and a 'Press Up/Down Keys to scroll' instruction is present. The footer shows 'General Department' and '01 - Host Name'.

Products	Value	Points	Qty.	Line Value
001 Product 1	0.99	9.00	0	0.00
002 Product 2	0.99	0.00	0	0.00
003 Product 3	1.08	0.00	0	0.00
998 Confirm Purchase				
999 Cancel				

Figure 5.5

Screen Description

Card Discount

This is the Customers' Card Discount saved on the card.

Products - 001 - ...

A list of Products in the selected application.

Confirm Purchase - 998

An option to Confirm Products purchase.

Cancel - 999

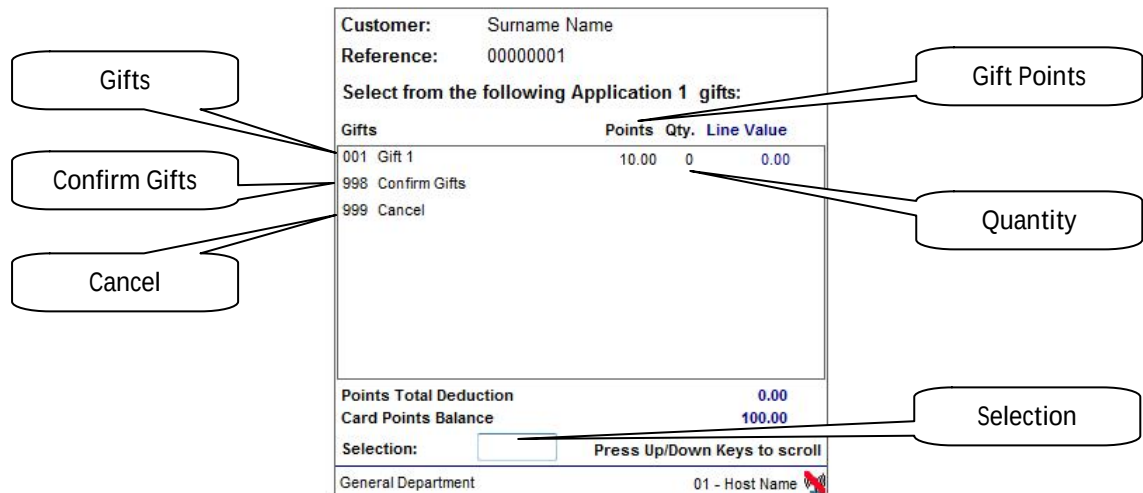
An option to Cancel Products purchase.

Selection

Select a Product from the Products list, type in the number for that selection and press "Enter".

Gifts Shopping Cart

(For XQuadra.Business & XQuadra.Enterprise only)



The screenshot shows a software interface for managing gifts. At the top, it displays 'Customer: Surname Name' and 'Reference: 00000001'. Below this is a section titled 'Select from the following Application 1 gifts:'. A table lists three items: '001 Gift 1' with 10.00 points and 0 quantity, '998 Confirm Gifts', and '999 Cancel'. At the bottom, it shows 'Points Total Deduction' as 0.00 and 'Card Points Balance' as 100.00. A 'Selection:' field with a cursor and the instruction 'Press Up/Down Keys to scroll' is present. Callouts point to various elements: 'Gifts' points to the table, 'Confirm Gifts' points to the '998' row, 'Cancel' points to the '999' row, 'Gift Points' points to the 'Points' column, 'Quantity' points to the 'Qty.' column, and 'Selection' points to the 'Selection:' input field.

Gifts	Points	Qty.	Line Value
001 Gift 1	10.00	0	0.00
998 Confirm Gifts			
999 Cancel			

Points Total Deduction: 0.00
Card Points Balance: 100.00
Selection: Press Up/Down Keys to scroll
General Department: 01 - Host Name

Figure 5.6

Screen Description

Gifts - 001 - ...

A list of gifts in the selected application.

Confirm Gifts - 998

An option to Confirm Gifts.

Cancel - 999

An option to Cancel Gifts.

Gift Points

A number of points for each Gift.

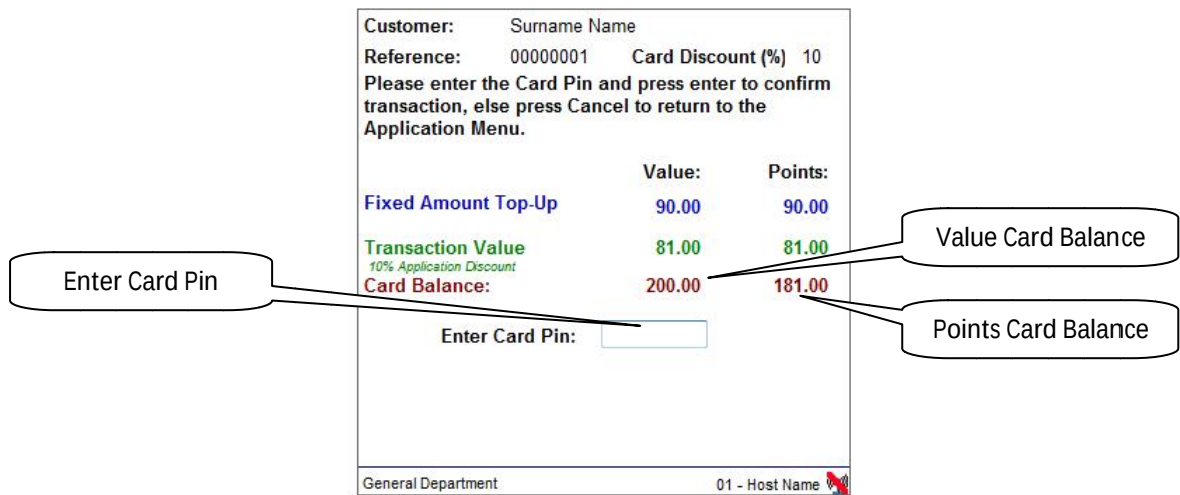
Quantity

Quantity of Gifts ordered.

Selection

Select a Gift from the Gifts list, type in the number for that selection and press "Enter".

Fixed Amounts



Customer: Surname Name
Reference: 00000001 Card Discount (%) 10
Please enter the Card Pin and press enter to confirm transaction, else press Cancel to return to the Application Menu.

	Value:	Points:
Fixed Amount Top-Up	90.00	90.00
Transaction Value	81.00	81.00
10% Application Discount		
Card Balance:	200.00	181.00

Enter Card Pin:

General Department 01 - Host Name

Figure 5.7

Screen Description

Value Card Balance

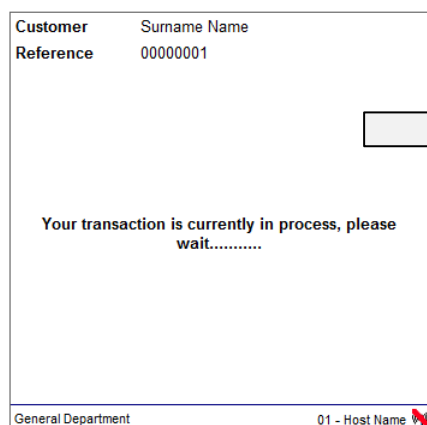
The Customers' Card Amount Value after doing the Fixed Amount Transaction.

Points Card Balance

The Customers' Card Amount of Points after doing the Fixed Amount Transaction.

Enter Card Pin

The Card Pin is required only if this option is chosen in XQuadra.Express and XQuadra.Administration. If this option is chosen, the Customer should enter the Card Pin before making a transaction.

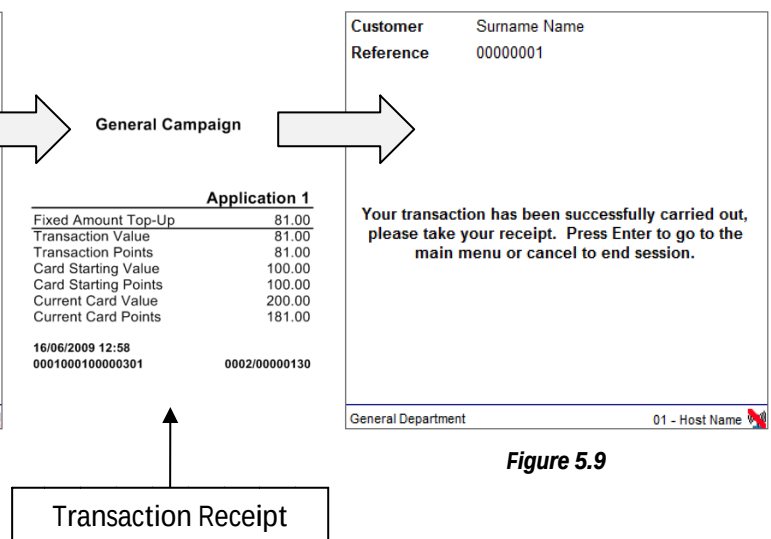


Customer Surname Name
Reference 00000001

Your transaction is currently in process, please wait.....

General Department 01 - Host Name

Figure 5.8



Customer Surname Name
Reference 00000001

General Campaign

Application 1	
Fixed Amount Top-Up	81.00
Transaction Value	81.00
Transaction Points	81.00
Card Starting Value	100.00
Card Starting Points	100.00
Current Card Value	200.00
Current Card Points	181.00

16/06/2009 12:58
0001000100000301 0002/00000130

Your transaction has been successfully carried out, please take your receipt. Press Enter to go to the main menu or cancel to end session.

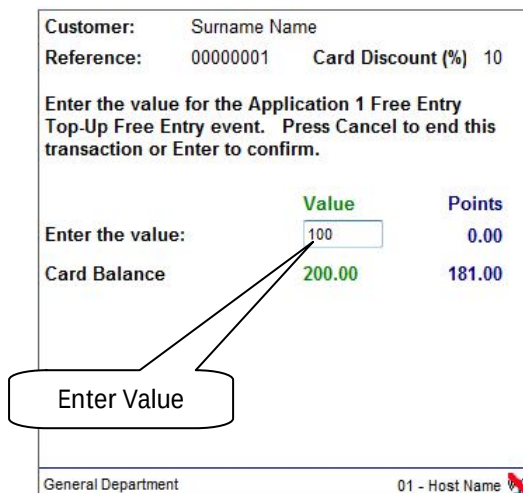
General Department 01 - Host Name

Transaction Receipt

Figure 5.9

If the Card Pin is accepted, the transaction is processed and if in XQuadra.Express/XQuadra.Administration the "Print" option is chosen, the Transaction Receipt is previewed and can also be printed.

Free Entries



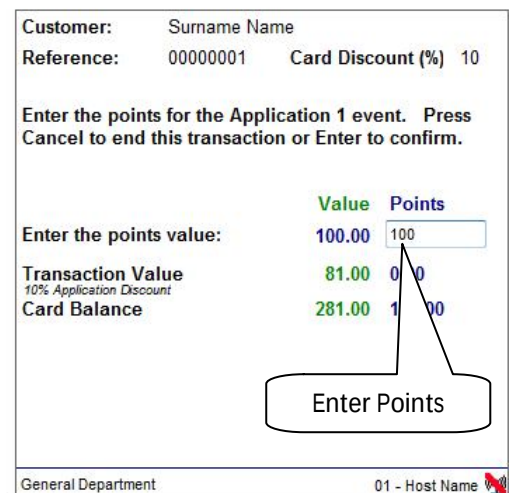
Customer: Surname Name
Reference: 00000001 Card Discount (%) 10

Enter the value for the Application 1 Free Entry Top-Up Free Entry event. Press Cancel to end this transaction or Enter to confirm.

	Value	Points
Enter the value:	100	0.00
Card Balance	200.00	181.00

General Department 01 - Host Name

Figure 5.10



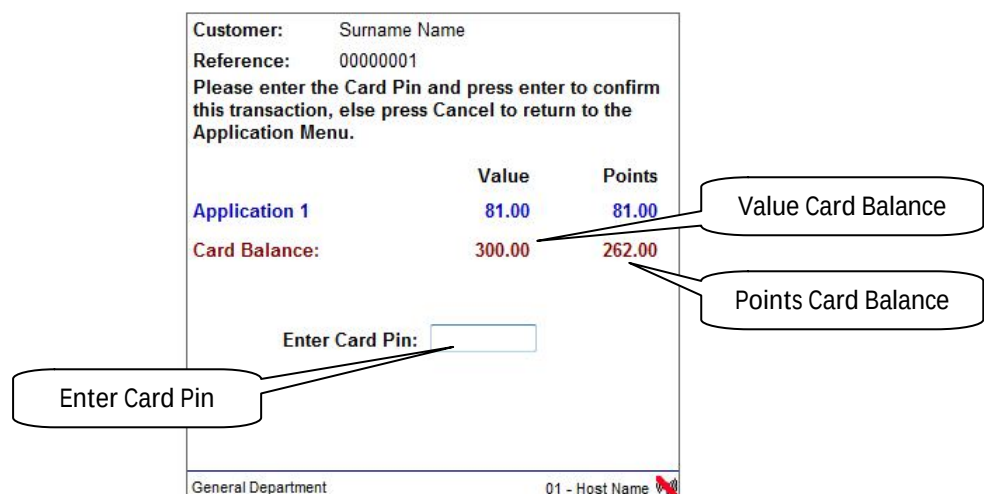
Customer: Surname Name
Reference: 00000001 Card Discount (%) 10

Enter the points for the Application 1 event. Press Cancel to end this transaction or Enter to confirm.

	Value	Points
Enter the points value:	100.00	100
Transaction Value	81.00	0.00
10% Application Discount		
Card Balance	281.00	1.00

General Department 01 - Host Name

Figure 5.11



Customer: Surname Name
Reference: 00000001
Please enter the Card Pin and press enter to confirm this transaction, else press Cancel to return to the Application Menu.

	Value	Points
Application 1	81.00	81.00
Card Balance:	300.00	262.00

Enter Card Pin:

General Department 01 - Host Name

Figure 5.12

Screen Description

Enter Value

Enter the Free Entry Value.

Enter Points

Enter the Free Entry Points.

Value Card Balance

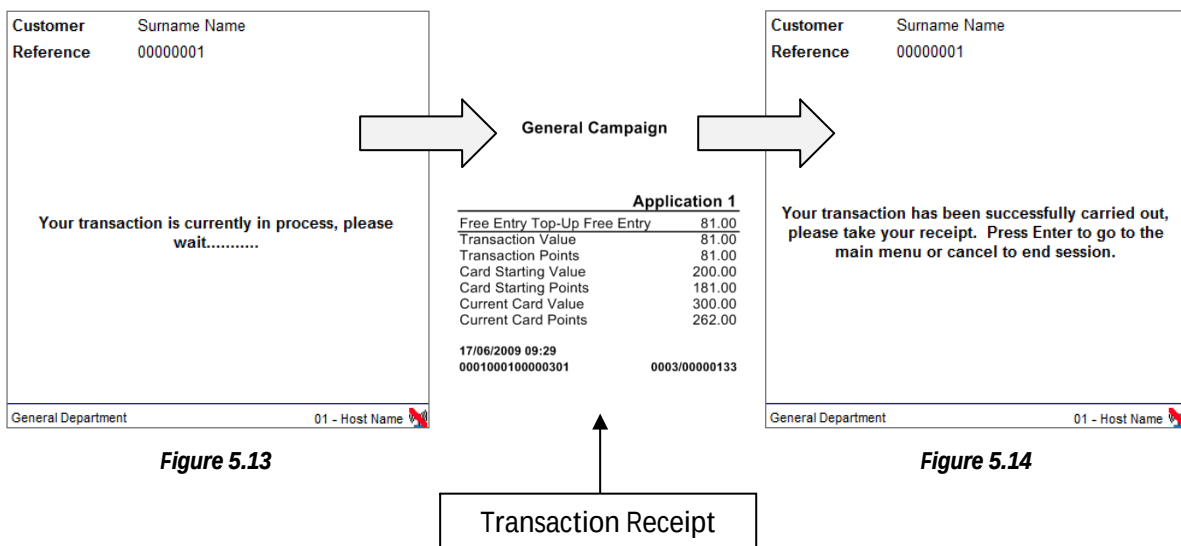
The Customers' Card Amount Value after doing the Fixed Amount Transaction.

Points Card Balance

The Customers' Card Amount of Points after doing the Fixed Amount Transaction.

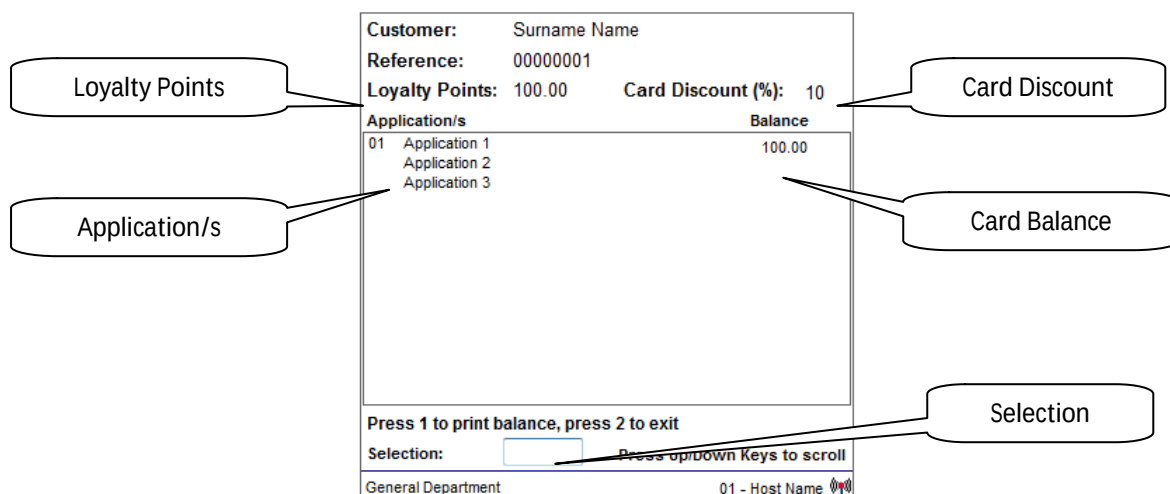
Enter Card Pin

The Card Pin is required only if this option is chosen in XQuadra.Express and XQuadra.Administration. If this option is chosen, the Customer should enter the Card Pin before making a transaction.



If the Card Pin is accepted, the transaction is processed and if in XQuadra.Express/XQuadra.Administration the "Print" option is chosen, the Transaction Receipt is previewed and can also be printed.

5.5 POSCe Balance Screen



The screenshot shows the POSCe Balance Screen with the following fields and callouts:

- Loyalty Points:** Points to the field showing 100.00.
- Application/s:** Points to the list of applications (Application 1, Application 2, Application 3).
- Card Discount:** Points to the field showing 10%.
- Card Balance:** Points to the field showing 100.00.
- Selection:** Points to the input field for selecting an option (1 or 2).

Additional fields visible on the screen include:

- Customer: Surname Name
- Reference: 00000001
- Application/s: 01 Application 1, Application 2, Application 3
- Balance: 100.00
- Press 1 to print balance, press 2 to exit
- Selection: [Input Field]
- Press up/down Keys to scroll
- General Department
- 01 - Host Name

Figure 5.15

Screen Description

Application/s

The Application Names stored on the Customers' card.

Balance

The Customers' card Balance for each application group. (Groups are available in XQuadra.Business and XQuadra.Enterprise **ONLY**)

Card Discount

The Customers' card Discount provided by the Client.

Loyalty Points

The Customers' amount of Loyalty Points accumulated.

Selection

Select an option from 1 -2, type in the number for that selection and press "Enter".

1. To print Balance
2. To Exit from the Balance section

5.6 POSCe History Screen

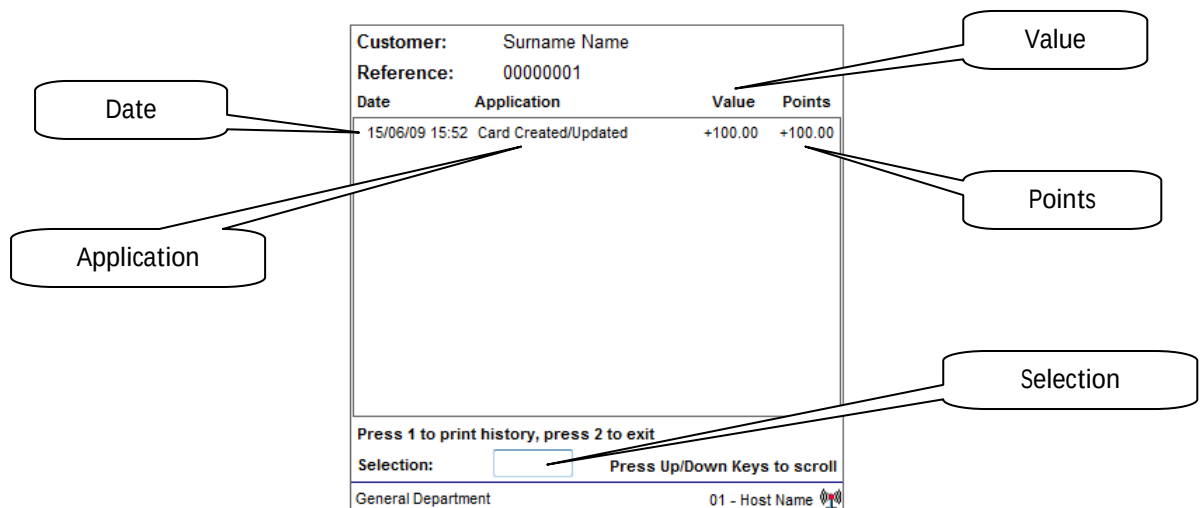


Figure 5.16

Figure 5.16 shows the Card History. This section displays the last five transactions carried out on the card.

Screen Description

Date

The Date of the selected transaction.

Application

The Application Name on which the transaction was carried out.

Value

The Value added/subtracted for each transaction.

Points

The Points added/subtracted for each transaction.

Selection

Select an option from 1 -2, type in the number for that selection and press "Enter".

1. To print History
2. To Exit from the History section

5.7 Administration Interface Description

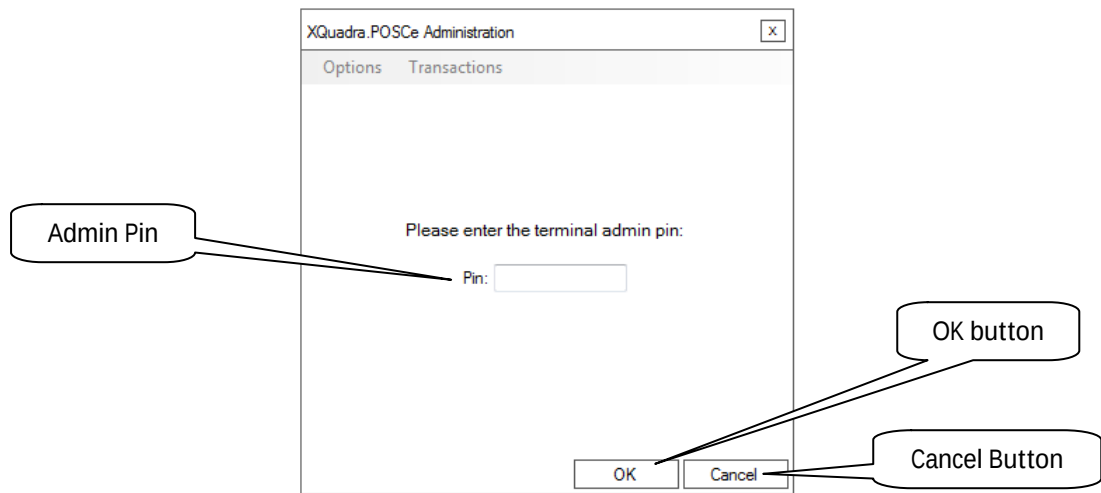


Figure 5.17

Screen Description

Admin Pin

To enter the Administration section you need to type in the Admin Pin.

OK button

The OK button is used to login to the Administration section. If the password is incorrect, you are asked to re-type the password, else if password is correct, you are logged in.

Cancel button

The Cancel button is used to return to the Main Menu Screen.

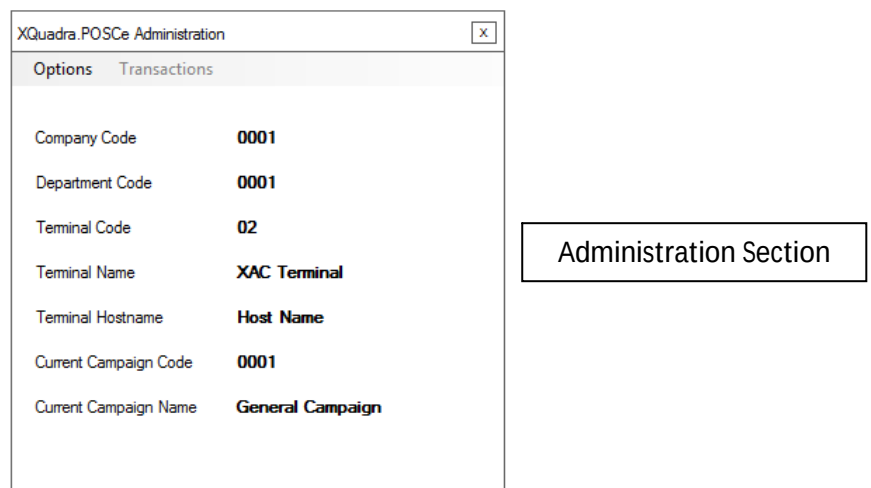


Figure 5.18

5.8 Administration Options Menu

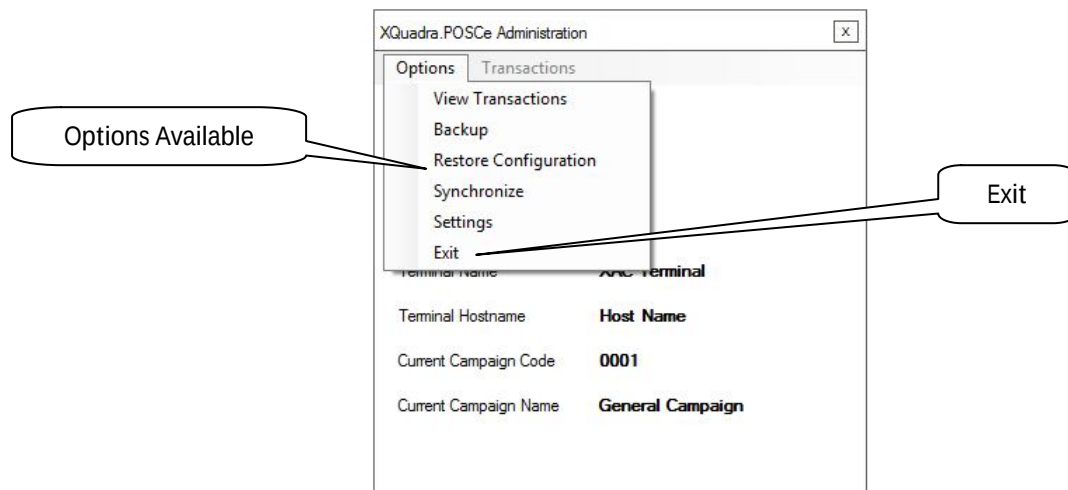


Figure 5.19

Screen Description

Options Available

These are the options available in the Administration Options Menu:

1. View Transactions

This option enables the Transactions Menu and shows the Transactions screen. Transactions can be filtered by Date.

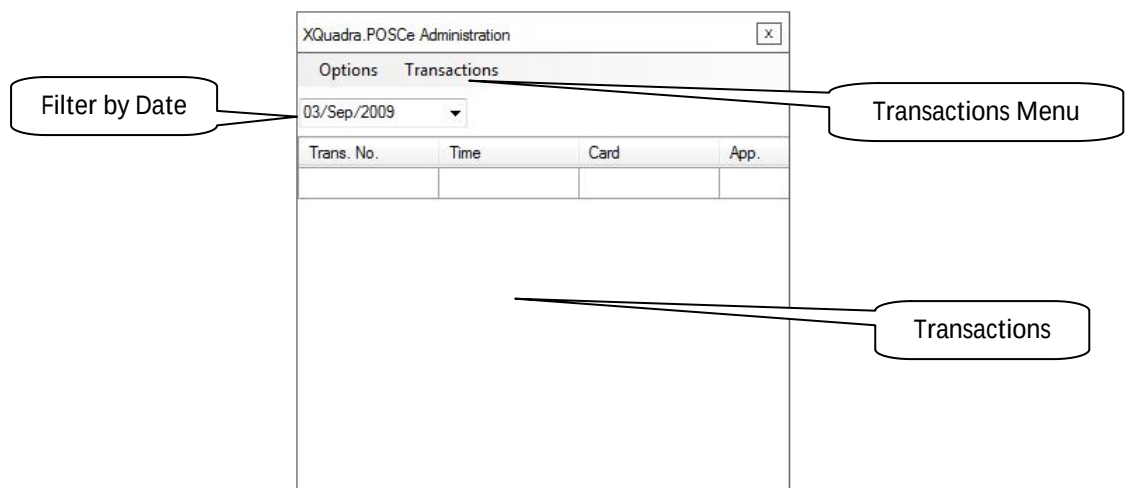


Figure 5.20

2. Backup

This option creates a backup folder on the USB Key. The folder is named "XQuadra_POS Terminal_" + the date when the backup was created "180609_" and the time when the backup is done "1205" - XQuadra_POS Terminal_180609_1205

3. Restore Configuration

This option restores the terminal Configuration files with the ones on the USB Key.

4. Synchronize

This option synchronizes the XAC terminal with the Web Services and uploads the transactions done on the XAC.

(For XQuadra.Business and XQuadra.Enterprise **ONLY**)

5. Settings

1. Circuit Number

This determines the application circuitry number.

2. Webservice URL

The URL to synchronize the data from and to the web service.

3. Enable Network

To enable the XAC network.

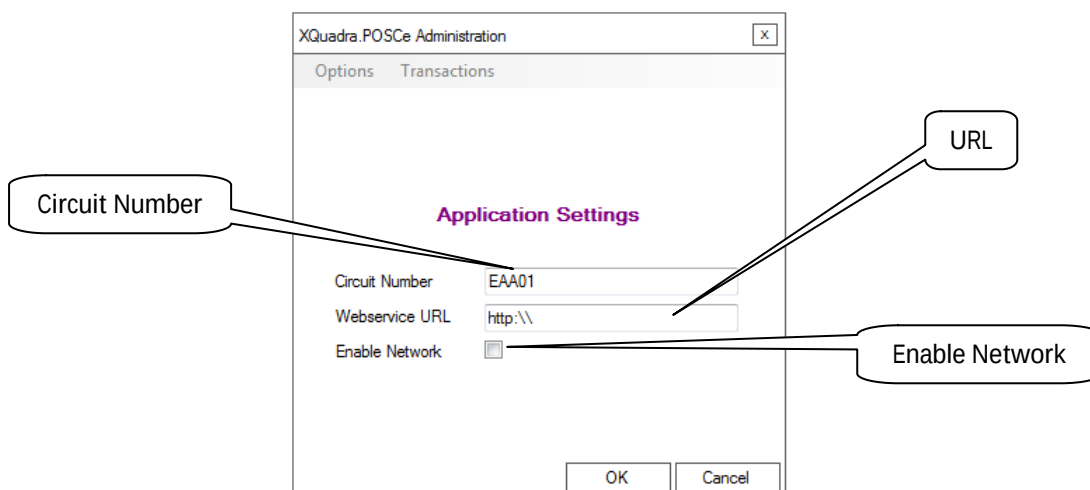


Figure 5.21

Exit

This is used to exit from the Administration section.

5.9 Administration Transactions Menu

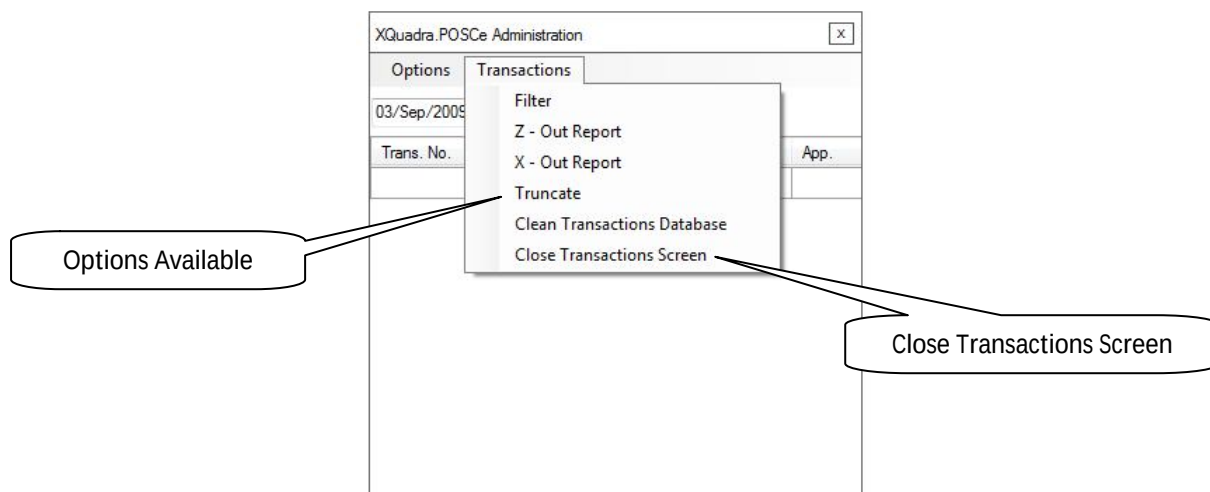


Figure 5.22

Screen Description

Options Available

These are the options available in the Administration Transactions Menu:

1. Filter
This option Filters the transactions by Date.
2. Z – Out Report
This option prints all the transactions made on the XAC terminal with all the transaction details.
3. X – Out Report
This option prints the transaction totals made on the XAC terminal.
4. Truncate
This option deletes the transactions which are already uploaded on the Database Server and which were not made on that particular day.
5. Clean Transactions Database
This option deletes all the transactions made on the XAC terminal and also on the Database Server.

Close Transactions Screen

This option closes the Transactions Screen and disables the Transactions Menu.

6. Glossary

Name	Description
Client	<i>The Client refers to the Owner of the solution.</i>
CMOS	<i>Complementary Metal Oxide Semiconductor (CMOS) is a technology for making integrated circuits. CMOS technology is used in microprocessors, microcontrollers, static RAM, and other digital logic circuits. CMOS technology is also used for a wide variety of analog circuits such as image sensors, data converters, and highly integrated transceivers for many types of communication.</i>
Customer	<i>The Customer refers to the Owner of the Smart Card.</i>
Gemplus	<i>Is a device manufactured by Gemalto to read Smart Cards.</i>
POS Terminal	<i>POS terminals (in comparison to central terminal) are handheld or desktop devices that can conduct transactions with smart or mag-stripe cards.</i>
Smart Card	<i>Also called IC card, chip card or memory card (for certain types). A card formed of a plastic body with a chip (or module) embedded in a special cavity.</i>
Terminal	<i>Any device that can communicate with a smart card (e.g., reader, coupler...). Certain terminals can operate in standalone mode, while others must be connected to a central information system to access an application.</i>
XAC	<i>XAC is a leading R&D/Manufacturing company focused on transaction automation devices.</i>
XQuadra.Business	<i>XQuadra.Business refers to the Business Edition software of XQuadra.</i>
XQuadra.Enterprise	<i>XQuadra.Enterprise refers to the Enterprise Edition software of XQuadra.</i>
XQuadra.Express	<i>XQuadra.Express refers to the Express Edition software of XQuadra.</i>
XQuadra.POS	<i>XQuadra.POS refers to the terminal software used with the Gemplus Card Reader.</i>
XQuadra.POSCe	<i>XQuadra.POSCe refers to the terminal software used with the XAC Terminal T201.</i>